

REMARKS

Reconsideration and allowance of this application are respectfully requested in view of the above amendment and the discussion below.

Applicants invention, as defined by amended independent claim 1, concerns a process which functions by gravity or, in other words, an open process for chroming an inner surface of a component by mixing chroming granules with an activator and heating the mixture to form a coating gas including CrCl. The coating gas is dissipated and provided on the inner surface of the component to form a chromium containing diffusion layer due to the operation of gravity.

As can be seen in Figure 1, and as described in the specification, because the coating gas 8 has a greater density than the surrounding inert gas and because of the effect of gravity, there is automatically a continuous flow through the outlet 7 at the bottom of the vessel 5 where it is guided to cavity 2 of the turbine blade 1 and then acts upon the surface 2 to form the chromium-containing diffusion layer.

The British Patent GB 2,328,219 is a closed cycle process driven by thermal convection of different temperatures of the sources and the substrate inside the reaction container. The metal halide is produced from sources positioned at the bottom, the top and the side of the reaction container. Therefore, contrary to the assertion of the Examiner, the process of British Patent '219 does not occur automatically due to gravity.

In contrast, as discussed above, the present invention, as defined by amended independent claim 1, describes an open process driven by gravity whereas the British Patent '219 uses thermal convection to move metal halide produced at the sources to the substrate where the deposition reaction of the metal halides provides a coating of the substrate. Produced halides move back to the source through the thermal convection to the sources where new metal halides are formed.

Applicants respectively submit that independent amended claim 1, which corresponds to a combination of original claims 1 and 5, provides a process which, as a whole, is not shown or disclosed or made obvious by the British Patent '219. The secondary reference to Benden et al. U.S. Patent No. 4,148,275 even accepting the statement of the rejection for the showing of Benden et al. concerning the desirability of coating internal passages of a turbine blade, adds nothing toward meeting the claim limitations of amended independent claim 1 with respect to the use of gravity defining an open cycle process.

Therefore, Applicants respectfully request that this application containing claims 1-4 and 6-9 be allowed and be passed to issue.

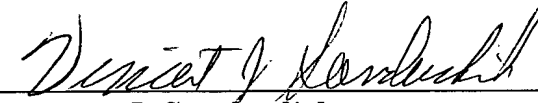
If there are any questions regarding this amendment or the application in general, a telephone call to the undersigned would be appreciated since this should expedite the prosecution of the application for all concerned.

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If necessary to effect a timely response, this paper should be considered as a petition for an Extension of Time sufficient to effect a timely response, and please charge any deficiency in fees or credit any overpayments to Deposit Account No. 05-1323 (Docket #038741.50233US).

Respectfully submitted,

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